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Standards for the level of nurse staffing in critical care units

The gold standard for nurse staffing levels in critical care in the United Kingdom has been established since 1967 at one nurse for each patient. Recent evidence suggests however that there is a great deal of difference in the staffing levels and skill mix between individual critical care units in the UK, with the result that nurses are being challenged to justify and defend the 1:1 ratio. The aim of this article is to provide the wider intensive care community with an overview of the Standards for Nurse Staffing in Critical Care units as proposed by the organisations representing critical care nurses in the UK.

by Vanessa Gibson

In this period of straitened economic circumstances, nurse staffing levels in critical care units (CCU) are a contentious issue. This article will highlight the main points of recently published guidelines for nurse staffing levels in the UK with a view to sharing the UK experiences with the wider intensive care community. Traditionally nurse staffing levels in the UK were set in 1967 at one nurse for one ventilated patient [1]. Staffing costs represent 50-60% of the total budget for critical care in the UK and nurse staffing represents a sizable proportion of this [2]. It is therefore not surprising that nurses have been challenged to defend these staffing levels.

In the year 2000 the UK Department of Health recommended that the existing division into high dependency (HDU) and intensive care (ICU) beds be replaced by a classification based on the level of care required by the patient, and therefore in this article the term "critical care" will be used as an overarching term for HDU and ICU [2]. The British Association of Critical Care Nurses (BACCN) has an exemplary history for publishing position statements (guidelines) in order to provide evidence-based information for nurses.

Developing safe standards for nurse staffing levels in ICUs

The safety of the critically ill, ventilated patient is paramount hence the traditional nurse to patient ratio of 1:1. In recent years nurses have come under mounting pressure to review this ratio. Nurses in the UK turned to their professional organisations for guidance on this matter. As there are several organisations in the UK with an interest in critical care nursing, it was deemed appropriate that these should collaborate to review previously published guidelines and review the evidence base for staffing levels in critical care. The organisations involved included the British Association of Critical Care Nurses (BACCN), the Royal College of Nursing Critical Care and In Flight Forum (RCN) and the Critical Care Networks National Nurse Leads (CC3N) [see side-bar at the end of the article].

Previously published guidance on staffing levels have included that issued by BACCN in 2001 [3] and revised in 2005 [4] as well as that issued by the RCN in 2003 [5]. In 1999 the Audit Commission [6] found that there was significant variation in the number of nurses employed in critical care units. In addition to this, although the ratio of nurse to patients for high dependency or Level 2 patients [2] was 1:2, a

stable ventilated patient may require far less nursing input than an agitated high dependency patient. This prompted the challenge on traditional staffing levels in critical care.

The BACCN started to receive enquiries from its members who were under pressure from their employers to work more flexibly. Whilst the nurses were not averse to this, they were concerned about patient safety and that the set ratios would be lost completely once a precedent had been set for working with fewer staff. Therefore the BACCN, RCN and CC3N worked collaboratively and published the Standards for Nurse Staffing in Critical Care in 2010 [7]. Representation was sought from the members of the three organisations: a standards committee was formed with the remit to review a wide range of evidence and make

recommendations for nurse staffing levels in critical care.

The standards committee met on a number of occasions to agree terms of reference and develop a structure for the staffing standards document, but the main work involved the review of evidence. A number of bibliographic databases were searched, which resulted in approximately 3000 pieces of evidence being reviewed. The evidence included in the standards supports the higher ratio of nurses to deliver safe and effective critical care, and has been grouped into the following themes:

- Infection control
- The individual experience and competence of each nurse
- Size, geographical layout and number of beds in a unit
- The need for larger units to have a

Standards for Nurse Staffing in Critical Care Units Determined By: The British Association of Critical Care Nurses The Critical Care Networks National Nurse Leads Royal College of Nursing Critical Care & In-flight Forum

1. Every patient in a Critical Care Unit must have immediate access to a registered nurse with a post registration qualification in this specific speciality
2. Ventilated patients should have a minimum of one nurse to one patient
3. The nurse patient ratio within any Critical Care Unit should not go below 1 nurse to 2 patients
4. The level of care needs required by each patient should equate to the skills and knowledge of the registered nurse delivering and/or supervising that care
5. Critical Care Units should employ flexible working patterns as determined by unit size, activity, case mix and the fluctuating levels of care for each patient, to ensure patient safety and care delivery
6. A supernumerary clinical co-ordinator, who is a senior critical care qualified nurse will be required for larger and geographically diverse units of more than 6 beds. The clinical co-ordinator's role is to ensure effective, safe and appropriate care is delivered each shift, by managing and supporting staff and patients, and acting as a communicator and liaison between the rest of the multi-disciplinary team.
7. The layout of beds and use of side wards in a Critical Care Unit must be taken into account when setting staffing levels to ensure safe patient care.
8. On-going education for all nursing staff working in critical care is of principal importance to ensure knowledgeable and competent staff care for patients. Clinical Educator posts should be utilised to support this practice.
9. Health Care Assistants (HCAs) have a key role in assisting registered nurses in delivering direct patient care and in maintaining patient safety. These roles should be developed to meet the demands of patients and of the unit. However, the registered nurse remains responsible for the assessment, planning, delivery and evaluation of patient care.
10. The Assistant Practitioner's (APs) role in Critical Care can provide direct patient care under the indirect supervision of a registered nurse, who will remain responsible for the assessment, planning and evaluation of patient care. The effectiveness of the role of Assistant Practitioners in Critical Care Units requires further evaluation and research.
11. Administrative staff should be employed to ensure registered nurses are free to give direct patient care, and to support the critical care units and staff with essential data collection.
12. Critical Care nurses should be proactive in the development of multi-professional team working to optimise quality patient care and ensure a quality service.

The standards recommended by the three UK professional CCU nursing levels to allow flexible working yet maintain patient safety.



Nurse staffing costs are a large part of total ICU budgets, so staffing levels are being challenged. Nurses should participate in ICU data collection and evidence reviews to defend appropriate staffing levels, with the goal of maintaining patient safety.

- supernumerary shift co-ordinator
- Case mix and patient dependency
- Safety in relation to ventilated patients
- Mixed sex accommodation needs
- Team working
- Use of evidence based protocols
- Ongoing education and development of critical care nursing
- Administrative support for mandatory data collection

The staffing standards document acknowledged that nurses' roles in critical care in the UK may be distinct from other countries and therefore these staffing levels may not be applicable in other countries. National critical care organisations in other countries are therefore encouraged to conduct

their own reviews and develop their own standards.

After the lengthy review process the final document was launched at the BACCN National Conference in September 2009 and can be found on the website at www.baccn.org.uk. In order to reach a wider audience, a shortened version was published in the BACCN's professional journal, *Nursing in Critical Care* May/June edition 2010 [8].

Conclusion

The review of the evidence related to staffing levels in critical care has demonstrated that the contribution of nursing can be difficult to measure. Despite this there is an emerging body of evidence which

supports a high nurse-to-patient ratio in critical care. The safety of patients is paramount, and nurses need to protect patients and their current working conditions with firm evidence. In order to do this nurses need to be pro-active in the necessary data collection processes which are now part of the modern-day critical care unit. Nurses need to develop valid and reliable measurement tools to collect data on the contribution of nursing to patient outcomes in critical care. Only by developing and participating in data collection and evidence review will nurses be able to develop and defend appropriate staffing levels. Intensive care organisations and societies should think more broadly than just about nurse staffing levels, and work collaboratively to provide joint staffing standards across all professional groups for safe and effective critical care services.

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The three UK nursing organisations which collaborated on the new standards are BACCN, RCN and CC3N

The British Association of Critical Care Nurses (BACCN)

The BACCN was set up 25 years ago and is dedicated to the promotion of excellence in the provision and delivery of critical care nursing through mutual support, education research and multi-disciplinary collaboration. The BACCN has over 3000 members and 15 regions that cover the UK. The BACCN provides guidance for nurses but a vital role of the BACCN is in ensuring that critical care nursing is represented in many national arenas, such as at the Department of Health and National Institute of Health and Clinical Excellence (NICE). This ensures that critical care nurses help shape national policy and contribute to the development of national guidelines. The BACCN is managed by an elected national board and each region has a regional committee. The BACCN

holds an annual national conference and each of the regions hold regular study events. The BACCN is a member of the European Federation of Critical Care Nursing Association and the World Federation of Critical Care Nurses.

The Royal College of Nursing Critical Care and In-Flight Forum (RCN)

The RCN is a very large, general nursing organisation which provides a wide range of services for nurses. It represents nurses and nursing, promotes excellence in practice and shapes health policy. As the RCN is a general nursing organisation, the RCN forums were set up to bring together members working in similar nursing specialities or with similar interests. There are 41 RCN forums with the Critical Care and In-Flight Forum dedicated to representing critical care nurses.

Critical Care Networks National Nurse Leads (CC3N)

In its seminal publication "Comprehensive Critical Care: A review of adult critical care services", the Department of Health suggested in 2000 that hospital trusts form networks with the objective being that healthcare providers and commissioners work together to meet the needs of all critically ill patients in their geographical area. Therefore Critical Care Networks were set up to represent regions across the UK to assess the needs of critically ill patients, plan services and agree common standards and protocols. Each critical care network has a lead nurse. The CC3N is a professional advisory group, as well as a group which shares best practice and benchmarks across regions to ensure consistency and standards of care. This group advises on nursing elements of critical care at all levels.